Examining Students' Perception of using Social Media Technologies for Learning Purpose

Ahmed Salem Muftah[1]

Higher Institute Of Profession Overall, Misurata, Libya

&

School of Computing, University Utara Malaysia

* E-mail of the corresponding author: ahmedsmuftah1988@gmail.com

Zahir Mat Cha[2]

School of Computing, University Utara Malaysia

University Utara Malaysia

_____

Abstract

This study set out to examine the factors that influence postgraduate perception on the adoption social media technologies in learning is social influence. So many factors is said to influence users' attitude towards the use of a particular technology. In the case of social media technologies, social influence which include parent, lecturers and learning or institutional managements are part of the relevant factors that can militate the adoption of social media for learning purposes. Students might be denied the access to social media technologies in the course of learning for some potentially wrong reasons. If social media technologies are perceived as just for social activities such as gaming and interacting with friends and family, this perception would definitely affect students' opinion towards the use of social media technologies for learning activities. As such, this present study relies on the Unified Theory of Acceptance and Use of Technology (UTAUT) to provide a comprehensive understanding to university students' perception of using social media technologies for learning purposes.

Keywords: UTAUT, Social media technologies, postgraduate students.

1. INTRODUCTION

Given the current emergence and popularity of social media technologies, there is virtually no aspect of human endeavors that the social media technologies is not influencing. The educational sector is a perfect example of sectors where the influence social media technologies is growing increasingly by the day. Both learners and lecturers have shown considerable amount of interest in incorporating social media and technologies in their learning activities (Hamid, Waycott, Kurinia & Chang, 2015). Various social media technologies including social network sites (e.g. Facebook), microblogs (e.g. LinkedIn) and content communities (e.g. YouTube) are currently implemented into academic milieu of university students. Students sort after these technologies for connecting with their lecturers and peers, to access learning resources and to engage in collaborative learning (Osman & Koh, 2013; Sandars & Schroter, 2007). The typical example of how these social media technologies are helping students in their educational pursuits can be presented with the fact that, YouTube is brimful of learning contents in terms of video and digital contents that elaborate learning materials beyond what teachers can do in classrooms. Similarly, topical essays and epistles are readily available in LinkedIn and finally, Facebook for example is an easy platform for student to interact with peers and lecturers, share learning materials and collaborate in learning activities (Gao, 2013; Lockyer & Patterson, 2008; Murray, 2008).

The success of every technology is central to the perception of the users. Hence, the underlying logic among usage and acceptance of technologies is to understand users' perceptions of a given technology which are central to their usage of that technology. For instance, Picardo (2011) asserted that, students' perceptions of social technology usage determines the role in which social media technologies play in learning activities. In this regard, Venkatesh et al. (2003) theorized that, certain factors such as; performance expectancy, effort expectancy, social influence, and facilitating conditions are requisites to behavioral intention to use a technology and subsequently, the actual usage of the technology. Similarly with regards to usage of social media technologies for learning purpose in university, students' perceptions of the performance and applicability of social media technologies are crucial to understanding their usage (Wild, Cant, & Nell, 2014).

In view of the benefits of social media technologies in learning, there have been a considerable level of concern

among researchers with regards to the performance of social media technologies in the educational realm. For instance, Adamson (2012) lamented that, the use of social media technologies in learning possess a great potential of trivializing learning activities and purposes. This is because students might get carried away with the interactivity and digital environment of social media technologies which as a result could affect student performances (Buzzetto-More, 2014). However, the use of social media technologies in learning can result to substantial loss of pedagogical control and discipline in such a way that, the implementation of social media technologies can be a hindrance to learning (Wild, Cant, & Nell, 2014). This could be because students are used to using social media technologies such as Facebook and YouTube for social purposes and not for learning.

A handful number studies (McLoughlin & Lee, 2008; Schroeder, Minocha, & Schneider, 2010; Wild, Cant, & Nell, 2014) have delved on the potentials of social media technologies for learning purposes and educational activities especially in the tertiary institutions. These studies found significant importance of social media for learning activities. However, previous researcher have neither demonstrated the perceptions of students nor documented various learning activities that students are conducting with use of social media technologies (Lee, 2014). Similarly, although social media technologies are celebrated platforms and tools for anchoring collaborative learning among students and increasing interactivity among lecturers and students, little can be said about the academic performance and interactivity benefits of social media technologies from the student perspectives (Kuo, Walker, Schroder, & Belland, 2014). Therefore, this examines the relationship between students' performance expectancy of social media technologies on their usage for learning purpose.

It has been unanimously reported by previous researchers that, social media and social media technologies are increasingly important in learning and teaching among teachers and students because of convenience and flexible of social media technologies (Brown, 2010). This imply that, the implementation of social media technologies in learning activities enhances social constructivist techniques to learning by potentially improving students' interaction, involvement and collaboration in learning (Schroeder et al., 2010; Ferdig, 2007; McLoughlin & Lee, 2008). Hence, social media technologies are eradicating the traditional barriers to traditional classroom teaching (Brown, 2010). Meanwhile, it is hitherto uneasy to say that, students perceive social media technologies easy, convenience or flexible to use for learning purpose (Lim, Agostinho, Harper & Chicharo, 2013). As such, this study will investigate students' perception of effort expectancy and how such perception influence their usage of social media technologies for learning.

Among the importance of social media technologies in learning is the fostering of relationship and enhancing collaboration between learning mates. Impliedly, social media technologies influence the connection between lecturers and students and among students to collaborate in learning activities (Rifkin, et al., 2009). However, there has been serious concern among researchers that, lack of lecturers knowledge or lack of willingness to adopt social media technologies can influence the usage of students (Wild, et al., 2014). Similarly, the perception of peers on social media technologies can strongly impactful on students' usage of social media technologies for learning activities (Wheeler, et al., 2008). Therefore, this study aims at examining how social influence affect social media technologies for academic purpose.

2. LITERATURE REVIEW

2.1 Social Media Technologies for Learning Purpose

The importance of social media technologies in learning cannot be over emphasized. With application of social media technologies in learning, both students are lecturers are exposed to a more convenience, flexible and digitalized process of exchanging knowledge (Wild, Cant, & Nell, 2014). Jackson (2011) added that, the use of social media technologies for learning purpose expands the process of learning beyond classroom and open students and teachers to a more flexible and timely access of learning materials. In addition, the use of social media technologies in learning takes pressure out of learning which in other word, increase motivation to learn and participation in learning process. The usage of social media technologies in learning environments is full of potentials and benefits however, it is not without certain challenges and pitfalls. These challenges are depended on how students perceived the incorporation of social media technologies to learning (Picardo, 2011).

The recent sporadic advancement in information technologies and especially the Internet technologies are the main drivers of the widespread usage and acceptance of social media technologies. Subsequently, the pervasive usage of social media technologies are radically changing learning experience at all levels of learning. So many educational and learning concepts have been developed by theorists in line with the incorporation of social media technologies into learning and educational activities. For instance, social learning, and enjoyable learning concepts are examples of new learning framework that acknowledge the social media technologies in learning especially among university students. Also, these new advancements, also point out the widespread of social media technologies among university students (Sanusi et al. 2014 & Hussain, 2012). Equally, Jackson, von Eye,

Fitzgerald, Witt, and Zhao (2011) added that, due to the availability of the internet to people, in any place and at any time, social media technologies are reshaping peoples' experience in learning.

Social media technologies have been so influential in reshaping learning experiences especially among university students and in so many ways and dimensions (Hershey, 2009). Also, social media technologies have also been an important channel for pedagogical interaction and research tool (Rivera & Quiros, 2011). In the words of Sourbati (2004 p 587), "accessibility of electronic hardware and software" are the most vital variables of media use and adoption (Jones, 2009). In essence, social media technologies are exchanging the role of the traditional learning management tools. Most recently and in the view of day to day improvements in the technological environments of social media technologies, virtual class can now be held on Facebook. Also, YouTube has been the most sort after resource based website for many university students to learn practically with video and motion-based learning materials (Kaplan & Haenlein, 2010).

In line with the multidimensionality of the essence of social media technologies in learning and education, the importance of social media technologies can be categorized in the following manner with practical examples.

•   Social media technologies for educators: Educators use social media technologies to share learning contents. For example; Blogging, Edublogawards, TeacherTube, YouTube Twitter can be used to share detailed learning materials and explain concept with students.

•   Social media technologies for social learning: contents that are shared and posted by individuals on social media technologies such as; Facebook, Google+, blogs, LinkedIn and You Tube teaches people one or two things even when the authors of the post do not intend to teach with it.

•   Social media technologies for collaborated projects: social media technologies such as Wikipedia, blogs. Micro blog Twitters, Flickr and Myspace.com can be used for several flexible and collaborative projects whereby participants interact through these social media technologies (Daluba & Maxwell, 2013; Seaman & Tinti-kane, 2013 & Wagner, 2011).

In addition, there is a general conciliation among previous researchers on the essence of social media technologies in learning (Elkaseh, Wong, & Fung, 2016; Quesenberry, 2010 & Ramig, 2010). It has been established that, social media technologies can indeed serve several functions in the educational realm both in teaching and learning. For instance, educators can use social media technologies site to post lecture notes, to anchor group discussions on task assignment, make announcements and so forth. Meanwhile, students can also use these platforms for engaging their lecturers, to ask questions, interact with their colleagues and anchor their group projects on social technology platforms (Schlenkrich & Sewry, 2012).

The advancement of social media technologies in learning is not without some pitfalls (Ezeah et al., 2013). The top of these challenges is similar to many other new technologies which their acceptance and users experiences are determined by their perception of the technology. Certain number of previous researchers have noted that, in spite of the drastic importance of social media technologies especially in improving modern day learning experiences. The perception of users towards social media technologies have been mismatched (Rodriguez, 2011 & Sanusi et al., 2014). In essence, it is not all users that perceived social media technologies as positively influential to learning experiences. Some users believe that, social media technologies are "social" and can only be used for social purposes and cannot be applied in education and learning. However, the detriments of users' perception is that, it often affect their experiences in using a technologies. Therefore, users' perception predict the importance of a technology (Wagner, 2011).

2.2 The Unified Theory of Acceptance and Use of Technology

The propositions in this study solely rely on the Unified Theory of Acceptance and Use of Technology (UTAUT) as propounded by Venkatesh et al. (2003). The theory opined the determinants of behavioral intention and this use of a technology. The UTAUT model has been one of the renowned theories for understanding users' acceptance and usage of various types of technologies including social media technologies (Venkatesh & Zhang, 2010). The UTAUT model asserts that, certain factors are responsible for the usage of a technology namely performance expectancy, effort expectancy, social influence and facilitating conditions. This study focused on three factors namely; performance expectancy, effort expectancy and social influence. This factors are briefly defined below:

•   Performance expectancy explains users' perception and expectations of the usefulness of a given technology. Such expectancy is said to determine users' willingness and motivation to adopt the technology. Performance expectancy has been found as a major factor in explaining behavioral intention of accepting to use a particular technology (Sharma & Chandel, 2013 & Venkatesh et al., 2003). The perception of performance expectancy of social technology is the belief that, social media technologies is useful for learning purpose and it can be used for the purpose of interactive and collaborative learning.

•   This is the level of ease associated with users' perception of a technology. In other words, effort

expectancy describes users' perception of applicability, flexibility and usability of a particular technology (Sharma & Chandel, 2013 & Venkatesh et al., 2003). As such, if users' or students have the perception that, social media technologies are not flexible or they perceived that it is not convenient for them to use social media technologies for learning, no matter how much of access they have with social media technologies, students would not consider using it for learning purpose.

•   Finally, this factor explains how users' social composition can influence their decision to adopt a technology. Because social media technologies in particular are interactive platforms for engaging and interacting other parties. If the other parties are not cooperative or the perception towards the use of social media technologies is not mutual. Social media technologies can only be implemented in turmoil for any purpose (Al-alak & Alnawas, 2011; Sharma & Chandel, 2013 & Venkatesh et al., 2003). With regards to using social media technologies for learning purpose, if learning peers and collaborative partners do not have similar perception of social media technologies, hence it becomes difficult to implement for learning purpose.

2.3 The Relationship between Performance Expectancy and the Usage of Social Media Technologies for Learning

Performance expectancy explain users' perception of how well is a technology influence their endeavors (Agarwal & Prasad, 1998). In other word, performance expectancy predicts users' acceptance and behavioral intention to accept and use a technology. Previous studies have put this concept to empirical test (Calvert et al., 2005; Attuquayefio & Addo, 2014; Sung et al., 2015). These studies have revealed a mix-findings on the effect of performance expectancy on usage of technology. A similar study by Afarikumah and Achampong (2010) affirmed that, the usefulness of computer predicts the acceptance of computer. Following the UTAUT model propounded by Venkatesh et al. (2003) in explaining users behavioral predictors, this study formulate the following hypothesis:

H1: There is a significant relationship between performance expectancy and the usage of social media technologies for learning.

2.4 The Relationship between Effort Expectancy and the Usage of Social Media Technologies for Learning

Previous researchers have unanimously revealed that every technology user has a certain level of expectancy on the usability and accessibility of a given technology (Sun et al, 2015). This notion is highly supported by the expectancy theory which elaborated that, when a user believe a technology or system is too complex to use, he or she ordinarily evade the use of the system and technology (Pachter, et al., 2012). Corroboratively, Venkatesh et al. (2003) suggested that effort expectancy have positive effects on behavioral intention on technological acceptance. Thus, we propose the following hypothesis:

H2: There is a significant relationship between effort expectancy and the usage of social media technologies for learning.

2.5 The Relationship between Social Influence and the Usage of Social Media Technologies for Learning

The underlying credence is to understand users' attitude and perception towards a given technology (Hamari & Koivisto, 2015). This notion has been adopted widely in different context and to understand different technology including; knowledge management (Bock, et al., 2005), social networking services (Cheung, et al., 2011), e-learning (Hernandez, et al., 2011), blogs (Hsu & Lin, 2008), and e-commerce (Hamari, 2013). These previous studies have unanimously demonstrated that social influence such as family, colleagues, friends and other important people often influence the acceptance of a technology (Zhang, 2008; Sung et al., 2015). More relatedly, Holden and Overmier (2015) conducted their study in the context information technology and found that, social influence affect the acceptance and the continuous usage of information technology. Following this, and in line with the theoretical assumption by Venkatesh, et al., (2003), the following hypothesis is proposed:

H3: There is a significant relationship between social effort and the usage of social media technologies for learning

2.6 The Proposed Conceptual Framework

Based on the theoretical perspectives of UTUAT model, this study proposes the conceptual framework presented in Figure 1. The framework depicts the relationships between the independent variables and the dependent variables. These relationships are the basis for formulating the research hypotheses.
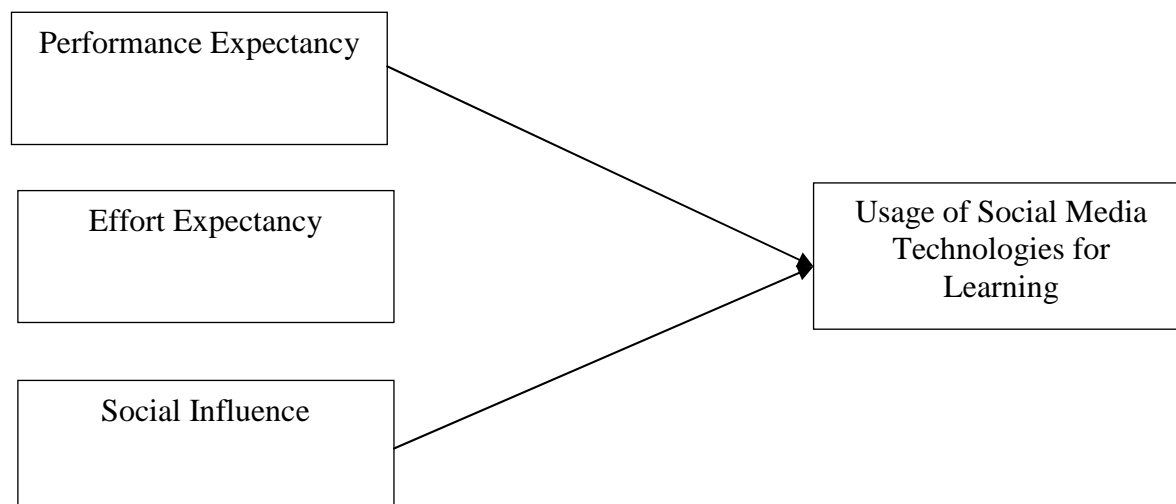
Figure 1 Proposed Conceptual Framework

3. METHODOLOGY

The main focus of this study is to investigate types of academic activities that postgraduate students are using social media technologies for. Relaying on the theoretical perspectives of UTAUT, this study will also examine postgraduate students' perceptions of performance expectancy, effort expectancy and social influence on their usage of social media technologies for learning purposes. The basis for selecting the UTAUT theory is that, the theory has been identified as a significant theory for understanding attitude, behavioral intention and perception towards adoption of technologies (Venkatesh & Zhang, 2010). A survey techniques for data collection is proposed for data collection. The data will be analyzed using various statistical packages in SPSS. The findings of the study will be reported and conclusions will be deduced.

4. CONCLUSIONS

Theoretically, this present study will provide invaluable contributions to the body of knowledge especially in validating the UTAUT model. This study proposed the adoption of UTAUT model by examining three constructs namely; performance expectancy, effort expectancy and social influence is providing comprehensive understanding of university students perceptions towards the use of social technology in learning activities. The findings of this study will therefore contribute to the pool of studies in this realm, in validating the UTAUT model and its applicability to study social media technologies. Practically, the findings of this study will communicate to lecturers, parents and university managements and other relevant parties to university students' educations including governmental agencies and ministries. The findings of this study will not only inform the relevant parties on the types of academic and learning facilities that students are doing with social media technologies, the findings would also illuminate clearly on how students can be influenced to use social media technologies for learning purpose. This study will also yield positive contributions by notifying lecturers and educators on the benefits of using social media technologies for academic and educational reasons from students' perspectives.

References

Adamson, C. (2012). The role of social media in education. Retrieved from: http://www.icwe.net/oeb_special/OEB_Newsportal/the-role-of-social-and-mobile-media-in-education/

Afarikumah, E. & Acheampong A. (2010). Modeling computer usage intentions of tertiary students in a developing country through the Technology Acceptance Model. International Journal of Education and Development using Information and Communication Technology (IJEDICT), 6(1), 102-116.

Agarwal, R., & Prasad, J. (1998). A Conceptual and Operational Definition of Personal Innovativeness in the Domain of Information Technology. Information Systems Research, 9(2), 204-215.

Al-alak, B., & Alnawas, I. (2011). Measuring the acceptance and adoption of e-learning by academic staff. Knowledge Management & E-Learning, 3(2).

Attuquayefio, S. N. & Addo, H. (2014). Using the UTAUT model to analyze students' ICT adoption.

International Journal of Education and Development using Information and Communication Technology (IJEDICT), 10(3), 75-86.

Bock, G.-W., Zmud, R. W., Kim Y.-G. &. Lee, J.-N (2005). Behavioral Intention Formation in Knowledge Sharing: Examining the Roles of Extrinsic Motivators, Social-Psychological Forces, and Organizational Climate. MIS Quarterly, 29(1), 87–111.

Brown, S. (2010). From VLEs to learning webs: the implications of Web 2.0 for learning and teaching. Interactive Learning Environments, 18(1), 1-10.

Buzzetto-More, N. A. (2014). An examination of undergraduate student's perceptions and predilections of the use of YouTube in the teaching and learning process. Interdisciplinary Journal of E-Learning and Learning Objects, 10, 17-32.

Calvert, S., Rideout, V., Woolard, J., Barr, R., & Strouse, G. (2005). Age, ethnicity, and socioeconomic patterns in early computer use: a national survey. American Behavioral Scientist, 48 (5), 590-607.

Cheung, C. M. K., Chiu P.-Y., & Lee, M. K. O. (2011). Online Social Networks: Why Do Students Use Facebook? Computers in Human Behavior, 27, 1337–1343.

Elkaseh, A. M., Wong, K. W., & Fung, C. C. (2016). Perceived Ease of Use and Perceived Usefulness of Social Media for e-Learning in Libyan Higher Education: A Structural Equation Modeling Analysis. International Journal of Information and Education Technology, 6(3), 192–199.

Ferdig, R. E. (2007). Editorial: Examining social software in teacher education. Journal of Technology and Teacher Education, 15(1), 5.

Gao, F. (2013). A case study of using a social annotation tool to support collaboratively learning. The Internet and Higher Education, 17, 76–83.

Hernandez, B. Montaner, T. Sese F. J. & Urquizu, P. (2011). The Role of Social Motivations in E-Learning: How Do They Affect Usage and Success of ICT Interactive Tools? Computers in Human Behavior, 27, 2224–2232.

Hamari, J. & Koivisto, J. (2015). Working Out for Likes: An Empirical Study on Social Influence in Exercise Gamification, Computers in Human Behavior, 50, 333-347.

Hamari, J. (2013). Transforming Homo Economicus into Homo Ludens: A field Experiment on Gamification in a Utilitarian Peer-to-Peer Trading Service. Electronic Commerce Research and Applications, 12(4), 236–245.

Hamid, S. Waycott, J., Kurinia, S., & Chang, S. (2015). Understanding students' perceptions of the benefits of online social networking use for teaching and learning. The Internet and Higher Education, 26, 1–9.

Hershey, M. (2009). Social Media Revolution. Think Magazine, 1, 31–33. Retrieved from; http://www.youtube.com/watch?v=sIFYPQjYhv8

Holden, J. M. & Overmier, J. B. (2015). Choice Behavior under Differential Outcomes: Sample Stimulus Control versus Expectancy Control. Learning and Motivation, 51, 50-61.

Hsu C.-L. & Lin, J. C.-C. (2008). Acceptance of Blog Usage: The Roles of Technology Acceptance, Social Influence and Knowledge Sharing Motivation. Information & Management, 45, 65–74.

Hussain, I. (2012). A Study to Evaluate the Social Media Trends among University Students. Procedia - Social and Behavioral Sciences, 64, 639–645.

Jackson, L. a., von Eye, A., Fitzgerald, H. E., Witt, E. a., & Zhao, Y. (2011). Internet use, videogame playing and cell phone use as predictors of children''s body mass index (BMI), body weight, academic performance, and social and overall self-esteem. Computers in Human Behavior, 27(1), 599–604.

Jones, R. (2009). Social Media Marketing 101, Part 1.

Kaplan, A. M., & Haenlein, M. (2010a). Users of the world, unite! The challenges and opportunities of Social Media. Business Horizons, 53(1), 59–68.

Kuo, Y. -C., Walker, A. E., Schroder, K. E. E., & Belland, B. R. (2014). Interaction, internet self-efficacy, and self-regulated learning as predictors of student satisfaction in online education courses. The Internet and Higher Education, 20, 35–50.

Lee, S. -M. (2014). The relationships between higher order thinking skills, cognitive density, and social presence in online learning. The Internet and Higher Education, 21, 41–52.

Lockyer, L., & Patterson, J. (2008). Integrating social networking technologies in education: A case study of a formal learning environment. Paper presented at the Eighth IEEE International Conference on Advanced Learning Technologies (Cantabria, Spain).

Mangold, W. G., & Faulds, D. J. (2009). Social media; the new hybrid element of the promotion mix. Business Horizons, 52, 357-365.

Mayfield, A. (2008). What is social media? Networks, 1.4, 36. doi:10.2217/rme.11.82

McLoughlin, C., & Lee, J. W. L. (2008). The three P's of pedagogy for the networked society: personalization, participation, and productivity. International Journal of Teaching and Learning in Higher Education, 20(1), 10-27.

Munshi, J. (2014). A Method for Constructing Likert Scales, (April).

Murray, C. (2008). Schools and social networking: Fear or education? Synergy Perspectives: Local, 6(1), 8–12.

Osman, G., & Koh, J. H. L. (2013). Understanding management students' reflective practice through blogging.

The Internet and Higher Education, 16, 23–31.

Pachler, N., Seipold J. & Bachmair, B. (2012). Mobile Learning: Some Theoretical and Practical Considerations. In Friedrich, K., Ranieri, M., Pachler, N., de Theux, P. (Eds.) The 'My Mobile' handbook. Guidelines and Scenarios for Mobile Learning in Adult Education, 11-16.

Picardo, J. (2011). Teaching and learning with social networks: Barriers to adoption. Retrieved from: http://www.josepicardo.com/2011/08/teaching-and-learning-with-social-networks-barriers-toadoption/

Quesenberry, K. (2010). Social Media in the Classroom: How to Integrate Social Networks And Blogs Into Traditional Curriculums. Retrieved from; http://aejmc.blogspot.com/2010/05/how-to-integrate-social-networks-and.html

Ramig, R. (2010). Social Media in the Classroom. Source, 8–11. doi:Article

Rifkin, W., Longnecker, N., Leach, J., Davis, L., & Ortia, L. (2009). Motivate students by having them publish in new media: An invitation to science lecturers to share and test. Paper presented at the Motivating Science Undergraduates: Ideas and Interventions, UniServe Science Proceedings.

Rivera, R., & Quiros, T. C. (2011). Learning and teaching technology, science and maths. Learning.

Rodriguez, J. E. (2011). Social Media Use in Higher Education: Key Areas to Consider for Educators. MERLOT Journal of Online Learning and Teaching, 7, 539–550.

Sandars, J., & Schroter, S. (2007). Web 2.0 technologies for undergraduate and postgraduate medical education: An online survey. Postgraduate Medical Journal, 83, 759–762.

Sanusi, B., Omowale, A., & Kayode, O. (2014). Adapting Social Media for Formal Learning in Nigeria: Challenges and Prospects. Arabianjbmr.com, 3(9), 22–30. Retrieved from; http://arabianjbmr.com/pdfs/OM_VOL_3_(9)/5.pdf

Schlenkrich, L., & Sewry, D. A. (2012). Factors for Successful Use of Social Networking Sites in Higher Education, (49), 12–24.

Schroeder, A., Minocha, S., & Schneider, C. (2010). The strengths, weaknesses, opportunities and threats of using social software in higher and further education teaching and learning. Journal of Computer Assisted Learning, 26(3), 159–174.

Seaman, J., & Tinti-kane, H. (2013). Social Media for Teaching and Learning. Retrieved from; http://www.pearsonlearningsolutions.com/higher-education/social-media-survey.php

Sekaran, U. (2003). Research Methods for Business: A Skill Building Approach. 4th Ed., New York, USA, John Wiley & Sons, Inc.

Shafique, F., Anwar, M., & Bushra, M. (2010). Exploitation of social media among university students: A case study. Webology.

Sharma, K. S., & Chandel, K. J. (2013). Technology Acceptance Model for the Use.pdf. International Arab Journal of E-Technology.

Sourbati, M. (2004). Digital Television, Online Connectivity and Electronic Service Delivery: Implications for Communications Policy (and Research). Media, Culture & Society (Vol. 26).

Sun, Y., Wang, N., Yin C. & Zhang, J. X. (2015). Understanding the Relationships between Motivators and Effort in Crowdsourcing Marketplaces: A Nonlinear Analysis. International Journal of Information Management, 35, 267-276.

Sung, H-N., Jeong, D-Y, Jeong, Y-S, & Shin, J-I (2015). The Relationship among Self-Efficacy, Social Influence, Performance Expectancy, Effort Expectancy, and Behavioral Intention in Mobile Learning Service. International Journal of u- and e- Service, Science and Technology, 8(9), 197-206.

Venkatesh, Morris, M., Davis, G., & Davis, F. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27, 425–478.

Venkatesh, V., & Zhang, X. (2010). Unified theory of acceptance and use of technology: US vs. China. Journal of Global Information Technology Management, 13, 5–27.

Wagner, R. (2011). Social Media Tools for Teaching and Learning. Athletic Training Education Journal, 6, 51–52. Retrieved from; http://csaweb109v.csa.com.ezproxy.lib.vt.edu:8080/ids70/view_record.php?id=4&recnum=41&log=from_res&SID=75pketf4eo60ftu6gurarhq7h4

Wheeler, S., Yeomans, P., & Wheeler, D. (2008). The good, the bad and the wiki: Evaluating student-generated content for collaborative learning. British Journal of Educational Technology, 39(6), 987–995.

Wild, J. A. Cant, M. C., & Nell, C. E. (2014). Perceptions and uses of social media networking systems by South African students. International Business & Economics Research Journal, 13(4), 715 – 726.

Zhang, P. (2008). Motivational Affordances: Reasons for ICT Design and Use. Communications of the ACM, 51(11), 145-147.